NEWS & VIEWS

INTERNET WEB BROWSERS

How the Web Will Change Computing

Browsers and dynamic interpreted languages like Java enable developers to write client/server applications that are inherently multiplatform

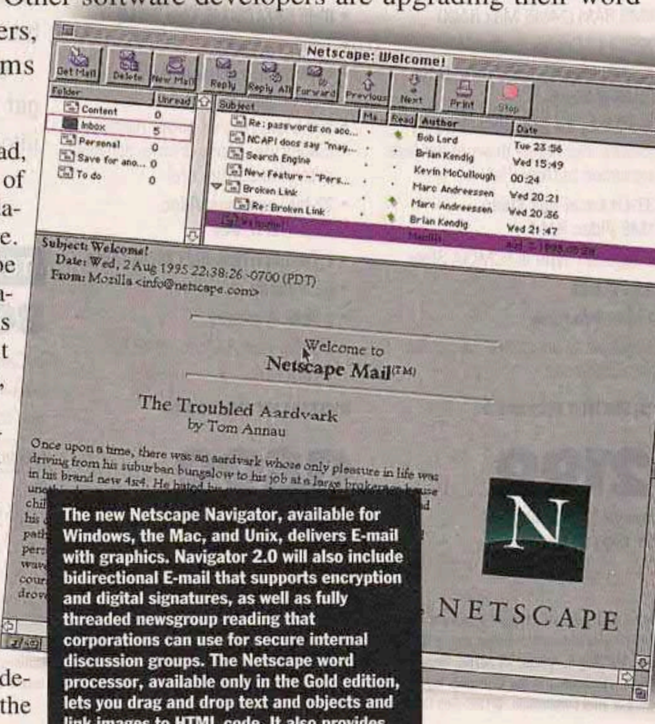
STEVEN J. VAUGHAN-NICHOLS AND RACHEL SCHMUTTER

Web browsers, those graphical front ends to the Internet, are multiplying faster than bunnies on a rabbit farm. As fast as they can, software vendors are adding Internet connectivity to their programs.

Fax-software vendors like Delrina have added browsers and other Internet connectivity programs to their communications suites. Lotus Development's integrated InterNotes Web Navigator browser in the new version of Notes Release 4) merges Notes- and Web-based data. Other software developers are upgrading their word processors, document managers, and even CD-ROM programs with Internet connectivity.

Internet mania is more than a fad, however: It marks the beginning of what many analysts feel is a fundamental shift in how we compute. "The browser will increasingly be the user's interface to the corporation and the world," says Dennis Freeman, marketing director at Frontier Technology (Mequon, WI), an Internet-software developer.

The latest version of the Navigator Web browser from Netscape (Mountain View, CA; (415) 254-1900; http://home.netscape.com) typifies this trend. Navigator 2.0 provides a wealth of new features (see the screen), but one of the most important is its support for the Java programming language from Sun Microsystems. Java lets developers of Web servers extend the capabilities of browsers beyond merely viewing information. A Java-enabled Web browser can download programs, called *applets*, such as data-entry forms, spreadsheets, animations, and graphics. Any client, provided it runs a Java-enabled browser, can access the Java application (for more information on Java technology, see "Wired on the Web," page 77).



Folder	Unread
Content	0
Inbox	5
Personal	0
Save for ano...	0
To do	0

Subject	Author	Date
Re: passwords on acc...	Bob Lord	Tue 23:56
NCAPI does say "may...	Brian Kendig	Wed 15:49
Search Engine	Kevin McCullough	00:24
New Feature – "Pers...	Marc Andreessen	Wed 20:21
Broken Link	Marc Andreessen	Wed 20:36
Re: Broken Link	Brian Kendig	Wed 21:47

Subject: Welcome!
Date: Wed, 2 Aug 1995 22:38:26 -0700 (PDT)
From: Mozilla <info@netscape.com>

Welcome to
Netscape Mail(TM)

The Troubled Aardvark
by Tom Annau

Once upon a time, there was an aardvark whose only pleasure in life was driving from his suburban bungalow to his job at a large brokerage house in his brand new 4x4.

The new Netscape Navigator, available for Windows, the Mac, and Unix, delivers E-mail with graphics. Navigator 2.0 will also include bidirectional E-mail that supports encryption and digital signatures, as well as fully threaded newsgroup reading that corporations can use for secure internal discussion groups. The Netscape word processor, available only in the Gold edition, lets you drag and drop text and objects and link images to HTML code. It also provides tools for document and image conversion.

Netscape's Navigator is the most popular Web browser (various estimates give it about 70 percent market share), and version 2.0 will be available for the Mac, Windows, and Unix. The company's lead in the Web browser field lets it promulgate extensions to HTML, the Hypertext Markup Language used to create Web pages, and to add new functionality such as the fast loading of low-resolution images and real-time chat to home pages. Other capabilities like fully threaded newsgroup reading and NetScape's Secure Sockets Layer for secure transactions, which other commercial companies can license, illustrate how Netscape is becoming much more than a mere vendor of browsers.

"Netscape is not trying to build Web browsers or Web servers, it's trying to build an infrastructure to support public and private distributed computing," says Jeremy Allaire, president of New World Media (Minneapolis, MN), a consultancy specializing in on-line systems and the Internet. "Netscape is building an operating system."

Netscape's browser isn't the only one that will support Java. Other browsers, including ones from Spry and Sun, will also support the new language.

Web browsers are changing in other ways. A more robust version of Netscape's program, called Navigator Gold (priced at about $79), breaks the boundary between browsers and HTML authoring tools by integrating a WYSIWYG authoring environment. Navigator Gold also provides you with a word processor.

Meanwhile, other browser

developers continue to improve on the Web's built-in hyperlinking capabilities. The SlipKnot 1.13 browser from MicroMind (slipknot@micromind.com) for Windows and OS/2 downloads data from all local HTML links (i.e., links specific to a given Web site) to your system in the background. This allows you to get a broad view of a Web site either on- or offline. Spyglass and NCSA are adding a similar feature to their browsers, but SlipKnot lets users pick and choose what links they want downloaded.

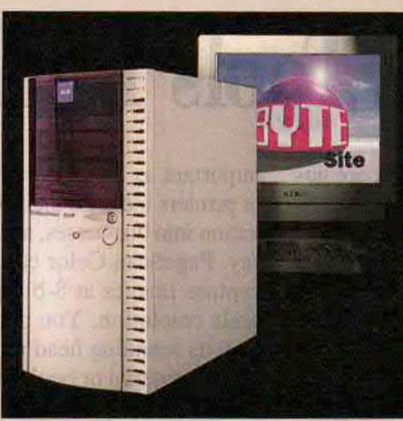
As browsers encroach on the turf of traditional applications such as word processors, as well as that of tools for developing custom front ends, companies like Microsoft are adapting. For example, Microsoft is investigating ways in which Visual Basic can act as a front-end development tool for the company's Internet Explorer 2.0. The company is also developing an electronic publishing tool (known as Blackbird) for the Microsoft Network and the Web.

Internet connectivity is important, agrees Chris Flores, Microsoft's product manager for Visual Basic. But he also says the Internet is just another extension for Visual Basic, which is a popular tool today among corporate developers for creating custom front ends. More than 1000 custom controls are available for Visual Basic developers today, Flores says, and several companies are developing controls for Internet access. However, Visual Basic is not a strong cross-platform solution thanks to Microsoft's Windows-centric strategy: There's no Visual Basic for the Mac, and few, if any, OLE Controls that will run natively on the Macintosh.

Netscape faces formidable competition but is ahead of Microsoft and other developers in building the ultimate TCP/IP network tool interface, says New Media's Allaire. Furthermore, Netscape is doing so at the application level for three major end-user operating systems: DOS/Windows, MacOS, and Unix.

PROCESSORS

Intel Beats the Clock... Again


The 200-MHz twin-Pentium Pro Evolution Dual6 from Advanced Logic Research typifies the new breed of relatively inexpensive PCs that will compete with Unix workstations. Prices for this system, which comes with one or two Pentium Pro processors, start at $3495 with 8 MB of ECC memory. (ALR, Irvine, CA, (714) 581-6770; fax, (714) 581-9240; http://www.alr.com)

Intel's surprise rollout of its 200-MHz Pentium Pro (aka the P6) processor will force its competitors in both the RISC and CISC camps to play catch-up this year. Most industry insiders expected Intel to release a 150-MHz, 256-KB-cache version of the Pentium Pro for desktop PCs and workstations in 1995, then follow with a 166-MHz, 512-KB-cache version for servers in the first quarter of 1996.

Instead, Intel is releasing those chips as scheduled, plus 180-MHz and 200-MHz versions during this quarter. (Both will have 256-KB cache and, like the 166-MHz Pentium Pro, will be built on Intel's .35-micron manufacturing process.) Intel will also release a 200-MHz, 512-KB-cache Pentium Pro in the second quarter of this year.

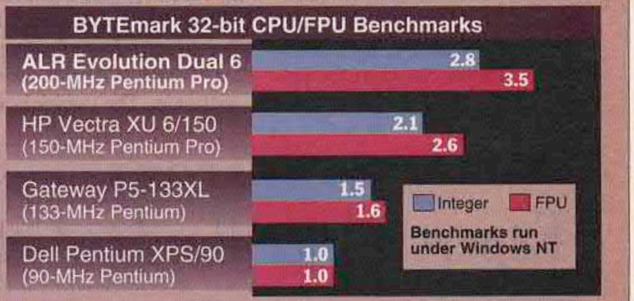
Intel experienced better-than-expected yields with its .35-micron process, which helped accelerate the release of the 200-MHz processor, company officials said. Several PC manufacturers told BYTE that the early availability of the 200-MHz version was a pleasant surprise. Intel's competitors were probably not as pleased: BYTE's cross-platform CPU benchmarks indicate that the 200-MHz Pentium Pro delivers 2.8 times the integer performance of a 90-MHz Pentium, and about 3.5 times the floating-point performance.

The 200-MHz Pentium Pro will show up in the kinds of workstations typically powered by RISC CPUs. Peter Lowber, senior analyst for workstations and servers at Datapro (Lexington, MA), says the 200-MHz Pentium Pro undermines the RISC value proposition. Although Digital, SGI, and HP will likely surpass Pentium Pro performance when they release new chips this year, Lowber says the RISC vendors must demonstrate substantially superior performance over relatively inexpensive Intel solutions.

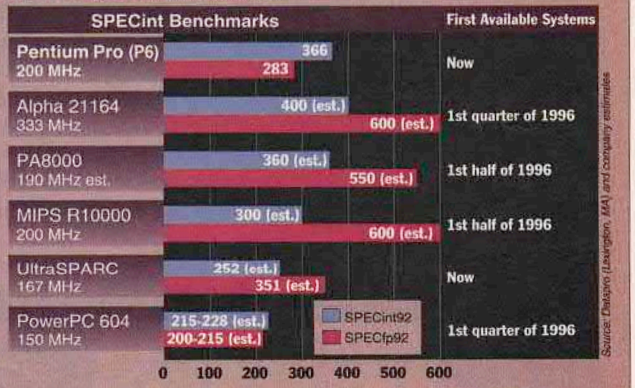
The news is worse for Intel's x86 competitors, AMD and Cyrix. AMD, which recently acquired NexGen, and Cyrix both sell Pentium-class processors now and won't ship Pentium Pro competitors for running 32-bit software before the end of this year. Meanwhile, Intel's Pentium prices have plummeted. A 200-MHz, 256-KB-cache Pentium Pro sells for $1325 (in quantities of 1000); a 75-MHz Pentium costs just $158 (the 60-MHz Pentium originally sold for $878). "I think Cyrix and AMD will have problems," Lowber says. "They're playing catch-up again."

—Dave Andrews

Looking Good at 200



P6 Competition Heats Up in 1996



Source: Datapro (Lexington, MA) and company estimates

Intel's RISC competitors will release new processors this year that should pass the Pentium Pro in performance. Also, while Pentium Pro processors are currently being built on a .35-micron manufacturing process, Intel's competitors are expected to release even higher-performing .3x-micron chips (not included in this chart) late this year.